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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/378,227	08/19/1999	TERENCE S. DOWLING	07844/322001	8868

21876 7590 09/24/2002

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EXAMINER

BELL, PAUL A

ART UNIT

PAPER NUMBER

2675

DATE MAILED: 09/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

PR4

**Office Action Summary**

Application No.

09/378,227

Applicant(s)

DOWLING ET AL.

Examiner

PAUL A BELL

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2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 August 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,11,17,18 and 42-51 is/are rejected.
- 7) ☐ Claim(s) 3-10,12-16 and 19-41 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 11, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Kumada et al. (5,563,725).

With regard to claim 1, Kumada et al. teaches a display system operable to display each of a plurality of pixels at a visual output intensity relative to an output display device according to a corresponding pixel input value, a method for determining device-specific information for pixels to obtain an optimal display of fine structure monochrome images on an output display device (abstract, figures 24 and 26, column 2, lines 58-63, column 10, lines 8-24, lines 54-67) method comprising determining a set of device-specific pixel input values that will cause the display system to display a corresponding set of target visual output intensities relative to the output display device (column 29, lines 12-34 and column 30, lines 9-40).

With regard to claim 17 Kumada was shown above in claim 1 to read on most of the broad limitations of claim 17 in addition applicant is now claiming "each pixel includes a plurality of sub-pixels each defining a color component and a sub-pixel position associated with a given pixel" since figure 6 shows RGB input data being processed to form RGB output data it is inherent that the display type would have a subpixel for each color.

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With regard to claim 2 Kumada was shown above in claims 1 and 17 to read on most of the limitations of claim 2 in addition applicant is now claiming; "a sub-pixel position associated with a given pixel" (it is inherent that subpixels have positions), and "sub-pixel has intensity" (it is inherent that each sub-pixel has an intensity or it would not work).

With regard to claim 11 Kumada et al. teaches wherein the output display device is selected from a group comprising color output display devices and monochrome output display devices (abstract).

With regard to claim 18 Kumada was shown above in claim 2 to read on all these broad limitations.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 42-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumada et al. (5,563,725) in view of Hill et al. (6,278,434).

With regard to claims 46 and 49 Kumada et al. was shown above in claim 1 and 17 to read on most of the broad limitations of claim 46 and 49 in addition applicant is now claiming his display is a liquid crystal display (LCD). Kumada et al. specification does not narrow itself to a specific display type but is directed toward "a plurality of monitor types" (abstract) and

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therefore a LCD which is conventional is clearly suggested by Kumada as an obvious intended use of the Kumada et al. invention.

As an example of a conventional "monitor type" Hill et al. teaches a color LCD display are exemplary of display devices which utilize multiple distinctly addressable elements, referred to herein as pixel sub-elements or pixel sub-components, to represent each pixel of an image being displayed (See Hill et al. column 2, lines 5-10) in which "color distortions such as color fringing is compensated by treating each pixel sub-component independently" (See Hill et al. abstract).

With regard to claim 42 the combination Kumada et al. and Hill et al. teaches wherein the sub-pixels are oriented for display on the output display device as a sequence of consecutive vertical color bars (see Hill figure 2a)

With regard to claims 43-45 the combination of Kumada et al and Hill et al. suggest wherein the sub-pixels are rectangular or square or round -shaped (See Hill et al. figures 2a and 15 and see Kumada abstract where he suggest all monitor types). Further recitations directed towards "shape" are given patentable weight when critically is shown that a specific precise shape is critical to function or operation of apparatus and that shape is not obvious or inherent. The fact that applicant has claimed various common shapes would suggest noncritically of shape.

With regard to claims 47 and 50 the combination of Kumada et al. And Hill et al. teaches "a sub-pixel position associated with a given pixel" (it is inherent that subpixels have positions),

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and "sub-pixel has intensity" (it is inherent that each sub-pixel has an intensity or it would not work).

With regard to claims 48 and 51 the combination of Kumada et al and Hill et al 4 teach, wherein the liquid crystal display (LCD) device has a RGB color space (see Hill et al. Figure 2B).

*Allowable Subject Matter*

5. Claims 3-10, 12-16, and 19-41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Bell whose telephone number is (703) 306-3019. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Saras, can be reached at (703) 305-9720.

Any response to this action should be mailed to: Commissioner of Patents and Trademarks  
Washington, D.C. 20231  
or faxed to: (703) 872-9314.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

*Paul Bell*  
Paul Bell

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15 September 2002

*Steven Saras*  
STEVEN SARAS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600